

The Cutting Edge of SWORD

A presentation proposal for Open Repositories 2009

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Abstract

The presentation will give an overview of the UK JISC (Joint Information Systems Committee) funded SWORD2 project. It will essentially be concerned with the need for, and development of, a specification that can be used for depositing research, and learning and teaching materials, and which gave rise to the original SWORD (Simple Web service Offering Repository Deposit) project 1. The presentation will look at how the original SWORD project and the current SWORD 2 project have realised the vision of a standard deposit protocol. The presentation will also consider the future of SWORD and look at some of the recent activity that has arisen around the project outputs, including the adoption into Microsoft Office, a SWORD Facebook application, a Netvibes widget, and current progress with international publishers.

The Cutting Edge of SWORD

The pressing need for a standard mechanism for depositing into repositories became clear in discussions in 2005 and in the service-oriented view of the JISC Information Environment, which identified 'deposit' as a key repository service function. In the ensuing two years various activities happened with support from international collaborators. Throughout, the potential for re-using existing standards had been a priority, but few repositories made headway in this area, and extra effort was needed to get a protocol agreed.

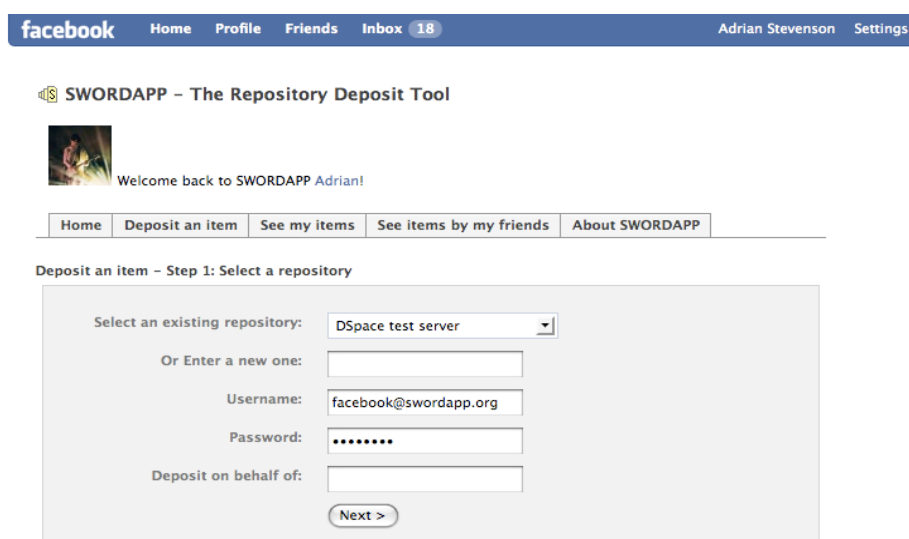
As a result, JISC funded the SWORD project, led by UKOLN at the University of Bath, in partnership with CASIS at the University of Aberystwyth, the University of Southampton and Intrallect, an e-learning repository vendor. The project aims were to agree on a protocol or specification for deposit, to implement a deposit interface into the DSpace, Fedora, EPrints and IntraLibrary repositories, and to produce a prototype 'smart' deposit client for testing the implementations. A number of deposit scenarios were addressed by the project. These included multiple deposit, such as deposit into both institutional and subject repositories, mandated deposit into funder-specified repositories, transfer from repository to repository and mediated deposit, meaning deposit on behalf of someone else. All these examples are supported by the SWORD protocol.

The SWORD project chose the Atom Publishing Protocol (APP or ATOMPUB) as the best fit for the job, being both lightweight and relatively straightforward to implement. Its uptake within the burgeoning blogosphere, being one of the underlying specifications used for blog posts, and its intimate connection to the popular Atom Syndication format (ATOM), widely used across the Web, made APP an appealing choice.

Within the boundaries of the SWORD project we have produced demonstration SWORD deposit interfaces in EPrints, Fedora, DSpace and IntraLibrary. Prototype desktop, command-line and web clients have also been developed, allowing for the testing of SWORD interfaces, and code for all of these implementations is available to enable re-use and wider dissemination within the worldwide repository community. Case studies demonstrated the potential for using SWORD and threw up some areas for refinement or further development.

The original SWORD project fulfilled its primary objectives and was well received by the repository community both in the UK and internationally, having successfully facilitated deposit into repositories from remote locations in a standardised way. The SWORD2 project has been looking at how to encourage and facilitate further uptake and wider implementation, as well as addressing a number of necessary refinements to the original SWORD protocol. The current project has seen the release of SWORD version 1.3, updated implementations in DSpace, Fedora, EPrints and IntraLibrary, and a SWORD validator. SWORD2 has also developed a Facebook application that allows users to deposit into a number of repositories from within Facebook, and some code libraries for PHP and .Net. An NHS e-learning case study was also recently completed.

New tools continue to be developed using the SWORD protocol, including the OfficeSWORD tool, which allows direct deposit from the suite of Microsoft Office applications, and an open source SWORD Widget enabling deposit from popular web tools such as Netvibes or any webpage.



The screenshot shows a Facebook interface with a custom application titled "SWORDAPP - The Repository Deposit Tool". The user is logged in as "Adrian Stevenson". The application has a navigation bar with links: Home, Profile, Friends, Inbox (18), and Settings. Below the navigation bar, there is a welcome message: "Welcome back to SWORDAPP Adrian!". The main content area shows a tabbed interface with "Deposit an item" selected. The "Deposit an item" tab is further divided into "Step 1: Select a repository". The form for "Step 1" includes a dropdown menu for "Select an existing repository" (currently set to "DSpace test server"), a text input for "Or Enter a new one:", a text input for "Username" (filled with "facebook@swordapp.org"), a password input for "Password" (masked with dots), and a text input for "Deposit on behalf of:". A "Next >" button is at the bottom of the form.

SWORD Facebook application

The screenshot shows a web browser window titled "SWORD - rwidgets.co.uk". Below the title bar is a blue header with a document icon and the text "<sword />". The main content area is divided into two sections. The top section contains a table of metadata:

Mediation	testing intraLibrary's SWORD interface.
Treatment	Zip archives recognised as content packages are opened and the individual files contained in them are stored. All other files are stored as is.
Namespace	http://www.imsglobal.org/xsd/imsdp_v1p1
Accepts	• */*

The bottom section is titled "Make a Deposit:" and contains three input fields: "Collection" (a dropdown menu showing "SWORD objects"), "File" (a text box with the path "/Users/adrianstevenson/De" and a "Browse..." button), and "On Behalf Of" (an empty text box). Below these fields is a "Make Deposit" button.

SWORD widget

Establishing a protocol and achieving a critical mass of uptake is notoriously difficult, but we believe SWORD has made real progress towards the goal of making interoperability of deposit a reality. Our presentation at OR2008 was extremely well received and since then our community has grown, with real-life implementations of SWORD in repositories beginning to happen across the world, and regular debate happening on our development mailing list. Open Repositories 2009 would be an excellent and highly appropriate opportunity to report on the progress of the SWORD2 project, and to update the repository community on some likely future developments with SWORD. It would also be a great opportunity to help spread the word further, and encourage the continued global uptake of the SWORD protocol. You can also twitter us at <http://www.twitter.com/swordapp> with your suggestions.